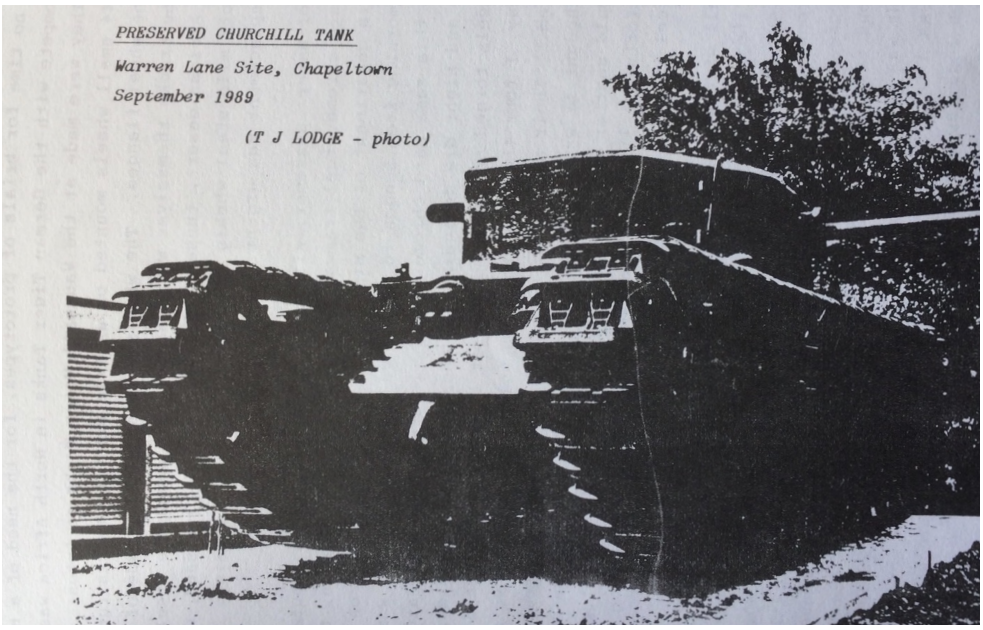
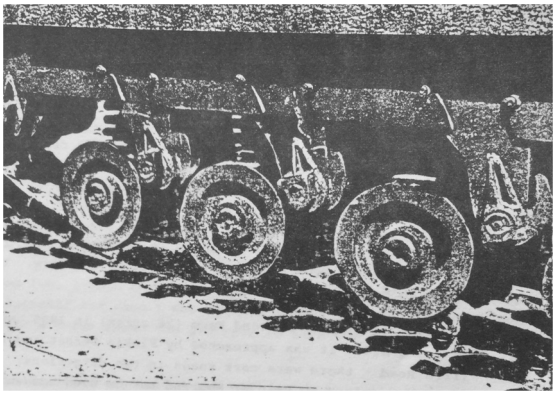
A WARTIME REMINISCENCE by Henry Baker



The heavy Churchill Tanks were made straight off the drawing board, there was no time for trials of prototypes, for the need of a heavy tank to compete with the German Tiger Tanks in North Africa was very urgent. They were made at the Vauxhall Motor Works at Luton.

Each Tank had 44 small wheels mounted on an axle with the tracks running between the wheel flanges. The wheels were originally made of cast mild steel. The tracks themselves were made of hard manganese steel. In the North African desert, these hard steel tracks, plus sand, wore out the soft mild steel wheels in only 120 miles of running. The need of replacement was urgent.



Details of tank track with chrome-steel wheels by Baker Bessemer. Photo by TJ Lodge

Our firm of Baker Bessemer, Kilnhurst Steelworks, had a reputation for its hard chrome steel tramway tyres. Sir John Duncanson, then head of his department of the Ministry of Supply, came down on a Saturday morning from London to ask if we could forge these small wheels in this same hard chrome steel.

I worked that same Saturday afternoon and night die designing and these were made on Sunday and sample wheels forged on the Monday, heat treated, machined and on the Tuesday, I took them down to Luton only to be told "We've solved the problem." Their answer was to fit chilled cast iron wheels.

I said I thought it was quite absurd and these hard manganese steel tracks would shatter any brittle chilled iron wheels. So it proved and in a fortnight they were back again demanding thousands of little chrome steel wheels.

These small wheels were made on our huge 4,000 ton hydraulic press, although they were only ten inches diameter. We had to devote the whole of our wheel forge production to making these little wheels, working round the clock on a 3 shift system.

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At first we failed to produce wore than 300 wheels a shift with no production bonus. It was obvious that the teams were slow timing, in spite of being told how urgent was the need in North Africa. So I fixed that 300 should be taken as a base for a production bonus. The effect was tremendous, production rose rapidly to 800 a shift and soon we were producing up to 12,000 wheels a week - enough for 250 to 300 Tanks. Altogether we made over half a million. The Churchill Tank was made a complete success.

Mr Baker was Chairman and Managing Director of the now defunct firm of Baker Bessemer, Kilnhurst Steelworks and has been retired since it closed 25 years ago. He is now 84 years old and has been a Life member of the S.T.H.S. (The Sheffield Trades Historical Society) and its predecessor for 42 years.